



CITY OF NOVI CITY COUNCIL
MAY 4, 2020

SUBJECT: Consideration of approval to award design engineering services to AECOM Great Lakes, Inc. for reconstruction of Cranbrooke Drive between Nine Mile Road and Village Wood Road, in the amount of \$142,010.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

EXPENDITURE REQUIRED	\$ 142,010
AMOUNT BUDGETED	\$ 176,661
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	203-203.00-865.186

BACKGROUND INFORMATION: Cranbrooke Drive is a north-south residential collector road, east of Meadowbrook Road, which runs from Nine Mile Road to Ten Mile Road. In 2018, the full extent of Cranbrooke Drive received an average PASER rating of 3 to 4, which falls in the poor-fair category. At this PASER rating, preventative maintenance is no longer effective and reconstruction is necessary.

The design of Cranbrooke Road from Village Wood Drive to Ten Mile Road was awarded to AECOM in December 2019. The goal is to have the design completed for all of Cranbrooke Road in 2020, with construction between Village Wood Drive and Ten Mile Road occurring in the summer of 2020 and construction between Nine Mile Road and Village Wood Drive occurring in the summer of 2021.

The Cranbrooke Road project will include concrete pavement reconstruction, aggregate base course, underdrain, driveway apron replacement, drainage improvements, enclosing the drainage, and roadway widening.

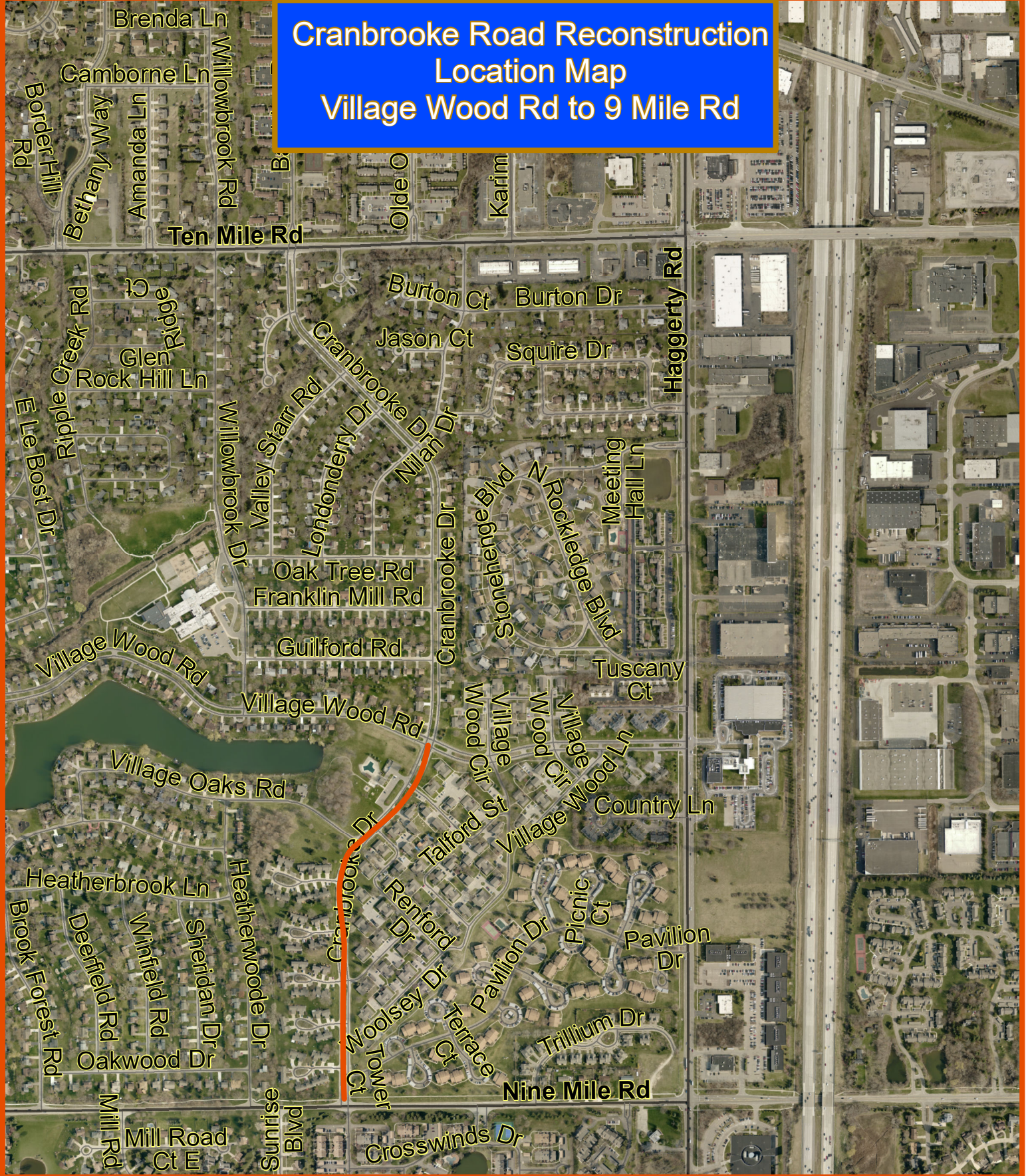
AECOM's engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects. The design fees for this project will be \$142,010, 6.25% of the estimated construction cost of

\$2,272,171. AECOM's proposal is enclosed and includes the project scope and schedule.

Design of this project would begin following award with construction estimated to begin in July 2021.

RECOMMENDED ACTION: Approval to award design engineering services to AECOM Great Lakes, Inc. for reconstruction of Cranbrooke Drive between Nine Mile Road and Village Wood Road, in the amount of \$142,010.

Cranbrooke Road Reconstruction Location Map Village Wood Rd to 9 Mile Rd



Map Author: Rebecca Runkel
Date: 3-3-20
Project: Cranbrooke Rd Recon
Version #: 1.0

MAP INTERPRETATION NOTICE

Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 152 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

Project Limits

				04	03	02	01
				09	10	11	12
18	17	16	15	14	13	12	11
19	20	21	22	23	24	25	26
30	29	28	27	26	25	24	23
31	32	33	34	35	36		



City of Novi
Engineering Division
Department of Public Works
26300 Lee BeGote Drive
Novi, MI 48375
cityofnovi.org

0 140 280 560 840
Feet

1 inch = 781 feet





March 25, 2020

Ms. Rebecca Runkel
City of Novi
Field Services Complex
26300 Lee Begole Drive
Novi, MI 48375

**Reference: Proposal for Engineering Services
Cranbrooke Dr. Reconstruction 9 Mile to Village Wood Rd**

Dear Ms. Runkel,

AECOM is pleased to submit this proposal for the above referenced project.

The work on Cranbrooke Drive includes concrete pavement reconstruction, aggregate base course, underdrain, driveway apron replacement, drainage improvements and enclosing the drainage on the outside of NB and SB Cranbrooke Drive. The roadway will be widened by 1 foot in each direction towards the median island (except near the southern most island near Nine Mile Road). The longitudinal profile of the road will be reviewed and improved to increase positive drainage where allowed by the surrounding infrastructure.

The following tasks will be completed for the project:

Initial Meeting and Scope Verification

The intent of this task is to meet with the City and verify the limits and scope of work for the project. Upon completion of this task, we will move forward with the surveying and preliminary design.

Survey and Base Plans

The intent of this task is to provide topographic survey and base mapping as needed for the proposed design work. We anticipate that a full topographic survey will not be required for this project. Base drawings will be created using the aerial photos supplemented by the field survey data and a field review of the site.

AECOM will prepare base plans (30%-40% complete) to identify the major design features. These plans will also be used to further the utility investigation and resolution of potential conflicts and *geotechnical* investigations. Base plans will include the results of the survey information, utility information from response to our solicitations, and a preliminary estimate.

AECOM will distribute the base plan design set to the utility companies that have indicated that they have facilities in the project area. We will incorporate the additional information that utility companies provide to AECOM into the plan set.



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Preliminary Plans

Incorporating the information obtained from the above tasks, we will prepare the preliminary plan set (90%) in accordance with City requirements. This submittal will include items such as the typical cross sections, materials/quantities and details. A Project Manual and preliminary updated cost estimate will also be prepared and submitted.

Final Plans and Proposal

Incorporating comments from the City, AECOM will develop the final plans submittal, including the plan set, Project Manual, and cost estimate.

Advertising and Award

We will respond to any final comments received from the City and submit the Advertisement for Bids to the City for publication. Contract Documents will be made available to bidders by AECOM. AECOM will respond to bidder inquiries during the advertising period and prepare addenda as required. Following the bid opening AECOM will submit the Bid Tabulation and a letter with recommendations regarding contract award

Construction

AECOM will provide full time inspection, contract administration, and staking as required for the project.

Schedule

We anticipate that the following schedule can be maintained:

Notice To Proceed with Design	April 15, 2020
Final Plans Submittal	June 1, 2020
Advertise for Bids	July 28, 2020
Open Bids	August 19, 2020
Contract Award	September 20, 2020
Begin Construction	July 1, 2021
End Construction	October 31, 2021

Estimated Cost of Construction and Design Fees

The attached estimate show the construction cost for this project:

Cranbrooke Rd Estimate - \$2,272,171.00.

The design fee (using the Engineering Fee Schedule for Roadway Reconstruction) is 6.25%..

Design Fee = 6.25% x \$2,272,171.00 = **\$ 142,010.**

We understand that fees for construction phase services will be determined after a construction contract is awarded.



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Please contact me if you have any questions or wish to discuss this submittal.

Sincerely,

AECOM Great Lakes, Inc.

A handwritten signature in blue ink that reads "Sean Kelsch".

Sean Kelsch, PE
Vice-President

City of Novi
Cranbrooke Drive (9 Mile to Village Wood)
Full Reconstruction
Preliminary Estimate of Cost
12/3/2019

Item No.	Item Description	Unit	Quantity	Unit Price (\$)	Total Cost (\$)
1	Mobilization (10%)	LS	1	\$ 206,561.00	\$ 206,561.00
2	Pre-Construction Audio-Visual	LS	1	\$ 3,000.00	\$ 3,000.00
3	Pavt, Rem	Syd	10,700	\$ 10.00	\$ 107,000.00
4	HMA Surface, Rem	Syd	3,985	\$ 5.00	\$ 19,925.00
5	Subgrade Undercutting, Special (1 x 3)	Cyd	500	\$ 55.00	\$ 27,500.00
6	Roadway Grading	Sta	23.5	\$ 6,500.00	\$ 152,750.00
7	Silt Fence	Ft	4,700	\$ 10.00	\$ 47,000.00
8	Curb and Gutter Inlet Filter	Ea	15	\$ 250.00	\$ 3,750.00
9	Concrete, Non Reinf, with Integral Curb, 8 inch	Syd	15,264	\$ 60.00	\$ 915,840.00
10	Curb and Gutter, Rem	Syd	612	\$ 9.50	\$ 5,814.00
11	Sidewalk, Rem	Syd	97	\$ 15.00	\$ 1,455.00
12	Sidewalk Ramp, Conc, 6 inch	Sft	915	\$ 8.00	\$ 7,320.00
13	Detectable Warning Surface	Ft	30	\$ 45.00	\$ 1,350.00
14	Underdrain, Subgrade, Open-Graded, 6 inch	Ft	4,700	\$ 15.00	\$ 70,500.00
15	Aggregate Base, 21AA Limestone, 6 inch	Syd	16,035	\$ 15.00	\$ 240,525.00
16	Permanent Signing	LS	1	\$ 5,000.00	\$ 5,000.00
17	Permanent Pavement Markings	LS	1	\$ 4,000.00	\$ 4,000.00
18	Maintaining Traffic	LS	1	\$ 20,000.00	\$ 20,000.00
19	Surface Restoration	LS	1	\$ 30,000.00	\$ 30,000.00
	Roadway Construction Subtotal				\$ 1,662,729.00
20	Dr Structure, Rem	Ea	21	\$ 450.00	\$ 9,450.00
21	Dr Structure, 48 inch dia	Ea	28	\$ 2,200.00	\$ 61,600.00
22	DPS Structure Cover, Adj, Case 1	Ea	24	\$ 650.00	\$ 15,600.00
23	Point Up Drainage Structure	Ea	12	\$ 300.00	\$ 3,600.00
24	Reconstruct Drainage Structure	Ft	12	\$ 200.00	\$ 2,400.00
25	Dr Structure Cover, Type K	Ea	28	\$ 850.00	\$ 23,800.00
26	Dr Structure, Tap, 12 inch	Ea	4	\$ 700.00	\$ 2,800.00
27	Sewer, CI E, 12 inch, Tr Det B	Ft	3,300	\$ 80.00	\$ 264,000.00
28	Culv Rem, Less than 24"	Ea	12	\$ 450.00	\$ 5,400.00
29	Sewer, Rem, Less than 24 inch	Ft	749	\$ 19.00	\$ 14,231.00
	Drainage Items Subtotal				\$ 402,881.00
	Subtotal Construction Items + Mobilization				\$ 2,272,171.00
	Design Engineering (6.25%)				\$ 142,010.69
	Design Contingency (10%)				\$ 14,201.07
	Construction Engineering (4.75%)				\$ 107,928.12
	Crew Days	CD	140	\$ 700.00	\$ 98,000.00
	Geotechnical Study (1.5%)				\$ 34,082.57
	Materials Testing (1.5%)				\$ 34,082.57
	Construction Contingency (10%)				\$ 227,217.10
	Total Construction Cost				\$ 2,929,693.11

Assumptions

Accounting for adjustment of all sanitary and water structures within limits of the project
Reconstruct approximately 2' on 25% of structures
Widening the road both northbound and southbound by 1' into the median
Includes the addition of enclosed drainage
No load transfer devices are included in this estimate. The aggregate and concrete cross section is similar to standard neighborhood roads design.